What is claimed is:

1   1.   A flaw inspection method by magnetic particle testing, comprising:

2   obtaining an image of a surface of a sample to be inspected by using a

3 color video camera where magnetic particle is coated;

4   extracting a flaw candidate of said inspected surface by processing the

5 obtained image;

6   displaying an image of the extracted flaw candidate on a display screen;

7 and

8   storing the displayed image to a memory.

1   2.   The flaw inspection method according to claim 1, wherein the

2 image stored in the memory is an image of a flaw extracted from the flaw candidate.

1   3.   The flaw inspection method according to claim 1, wherein the flaw

2 candidate is detected by using information on luminance of a green (G) signal component

3 among three RGB primary color signals from the color video camera.

1   4.   The flaw inspection method according to claim 1, wherein the

2 image obtained includes a positional information and the positional information is

3 displayed on the display screen with the image.

1   5.   A flaw inspection method by liquid penetrant testing, comprising:

2   illuminating a surface of a sample to be inspected with polarized light;

3   obtaining an image of the surface illuminated with the polarized light;

4   extracting a flaw candidate from the detected image of the surface by

5 processing the obtained image; and

6   displaying an image of the extracted flaw candidate.

1   6.   The flaw inspection method according to claim 5, wherein a
2   chromaticity of the obtained image is converted using a parameter.

1   7.   The flaw inspection method according to claim 6, wherein the
2   image is detected by using a color video camera and the parameter for converting the
3   chromaticity of the image is unique to the color video camera.

1   8.   The flaw inspection method according to claim 5, wherein the
2   image displayed is associated with a positional information.

1   9.   The flaw inspection method according to claim 8, wherein the
2   positional information is obtained with the image.

1   10.   The flaw inspection method according to claim 5, further
2   comprising:
3   detecting a flaw from the extracted flaw candidate; and
4   storing an image of the detected flaw into memory.

1   11.   A flaw inspection method, comprising:
2   illuminating a surface of a sample to be inspected with light;
3   obtaining an image of the surface;
4   extracting a flaw candidate of the inspected surface by processing the
5   obtained image;
6   displaying an image of the extracted flaw candidate;
7   detecting a flaw from the extracted flaw candidate; and
8   storing an image of the detected flaw into memory.

1   12.   The flaw inspection method according to the claim 11, further
2   comprising:
3   re-displaying the stored flaw image.

1   13.   The flaw inspection method according to the claim 11, wherein the
2   light illuminating the sample surface is polarized light.

1   14.   The flaw inspection method according to the claim 11, wherein the
2   light illuminating the sample surface is ultra violet light.

1   15.   The flaw inspection method according to the claim 11, wherein the

2   image is detected by using a color video camera.

1   16.   The flaw inspection method according to the claim 11, wherein the

2   image is displayed on a screen together with a positional information.

1   17.   The flaw inspection method according to the claim 11, wherein a

2   chromaticity of the image displayed is converted from the image using a parameter

3   unique to the color video camera.

1   18.   The flaw inspection method according to the claim 11, wherein the

2   image of the flaw candidate is displayed on a screen distinguishable from others.

1   19.   A flaw inspection method, comprising:

2   obtaining an image of a surface of an object to be inspected;

3   detecting a flaw from the obtained image;

4   displaying the detected flaw image on a screen; and

5   storing the displayed flaw image in memory; wherein the flaw image is

6   displayed on the screen distinguishable from other part of the object.

1   20.   The flaw inspection method according to the claim 19, further

2   comprising:

3   illuminating the object with a polarized light.

1   21.   The flaw inspection method according to the claim 19, further

2   comprising:

3   illuminating the object with an ultra violet light.

1   22.   The flaw inspection method according to the claim 19, wherein the

2   image is detected using a color video camera.

1   23.   The flaw inspection method according to the claim 19, wherein the

2   detected flaw image is displayed on a screen together with a positional information.

1   24.   A flaw inspection apparatus based on flaw testing, comprising:

2   illumination means for illuminating a surface of a sample to be inspected;

3   a color video camera which obtains an image of the surface;

4   flaw candidate extraction means for extracting a flaw candidate of the

5   surface from the image obtained by said color video camera;

6   display means for displaying an image of the flaw candidate extracted by

7   said flaw candidate extraction means;

8   flaw detection means which detects a flaw from the displayed flaw

9   candidate; and

10   memory means for storing the image of flaw detected by the flaw detection

11 means.

1   25.   The flaw inspection apparatus according to claim 24, wherein the

2   display means displays the image of the flaw candidate accompanied with a positional

3   information.

1   26.   A flaw inspection apparatus based on flaw testing, comprising:

2   a light source which illuminates a surface of a sample to be inspected;

3   a color video camera which obtains an image of the surface;

4   a chromaticity converter which converts a chromaticity of the image

5   obtained by the color video camera by using a conversion coefficient which is unique to

6   the color video camera;

7   a flaw candidate extractor which extracts a flaw candidate of the surface

8   from the image obtained by said color video camera which chromaticity is converted by

9   the chromaticity converter;

10   a display which displays on a screen an image of the extracted flaw

11 candidate which chromaticity is converted;

12   a flaw detector which detects a flaw from the displayed flaw candidate;

13 and

14   a memory which stores the image of flaw detected by the flaw detector.

1   27.   The flaw inspection apparatus according to claim 26, wherein said

2   chromaticity converter obtains conversion coefficients for converting RGB(Red, Green

3   and Blue) chromaticity values unique to said color video camera into reference xy

4   chromaticity values.

1   28.   A computer memory storing code for a flaw inspection method

2 using an object to be inspected, wherein said computer memory comprises:

3   code for obtaining an image of a surface of the object;

4   code for converting a chromaticity of the obtained image to extract a flaw

5 candidate;

6   code for detecting a flaw from the extracted flaw candidate; and

7   code for displaying the detected flaw image on a screen.

1   29.   A computer memory storing code for a flaw inspection method

2 using an object to be inspected, wherein said computer memory comprises:

3   code for obtaining an image of a surface of the object;

4   code for converting a chromaticity of the obtained image;

5   code for displaying on a screen an image of the object which chromaticity

6 is converted from the obtained image;

7   code for indicating a flaw candidate on the screen; and

8   code for displaying a flaw image on a screen detected from the candidate.